

47259500.txt
SEQUENCE LISTING

<110> OKUNO, KAZUAKI
YABUTA, MASAYUKI

<120> POLYPEPTIDE CLEAVAGE METHOD USING OMPT PROTEASE VARIANT

<130> 47259-5001-00-US (223490)

<140> 10/573,821
<141> 2006-03-28

<150> PCT/JP04/014704
<151> 2004-09-29

<150> JP 2003-342183
<151> 2003-09-30

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<170> PatentIn version 3.5

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<212> PRT
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<220>
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Trp Glu Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro
20 25 30

Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro
35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
50 55 60

Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
65 70 75 80

Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
85 90 95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
100 105 110

Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
115 120 125

Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Arg His His Gly
 130 135 140

Ser Gly Ser Pro Tyr Arg His Pro Arg His Ala Glu Gly Thr Phe Thr
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 35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50 55 60

Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
 65 70 75 80

Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
 85 90 95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
 100 105 110

Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
 115 120 125

Met His Ala Ala Ala Ala Ala Ala Ala Ala Ala Arg Arg Ala Ala Ala
 130 135 140

Ala Gly Ser Pro Tyr Arg His Pro Arg His Ala Glu Gly Thr Phe Thr
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Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro
 35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50 55 60

Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
 65 70 75 80

Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
 85 90 95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
 100 105 110

Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
 115 120 125

Met His Ala Ala Ala Ala Ala Ala Ala Ala Ala Arg Arg Ala Arg Ala
 130 135 140

Ala Gly Ser Pro Tyr Arg His Pro Arg His Ala Glu Gly Thr Phe Thr
 145 150 155 160

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47259500.txt
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<210> 4

<211> 184

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic
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 35 40 45
 Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50 55 60
 Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
 65 70 75 80
 Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
 85 90 95
 Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
 100 105 110
 Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
 115 120 125
 Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Phe Val Pro Ile
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 Phe Thr Tyr Gly Glu Leu Gln Arg Met Gln Glu Lys Glu Arg Asn Lys
 145 150 155 160
 Gly Gln

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 20 25 30
 Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro
 35 40 45
 Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50 55 60
 Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
 65 70 75 80
 Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
 85 90 95
 Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
 100 105 110
 Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
 115 120 125
 Met His Ala Ala Ala Ala Ala Ala Ala Ala Arg Arg Arg Ala Arg Phe
 130 135 140
 Val Pro Ile Phe Thr Tyr Gly Glu Leu Gln Arg Met Gln Glu Lys Glu
 145 150 155 160
 Arg Asn Lys Gly Gln
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Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro
 35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50 55 60

Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
 65 70 75 80

Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
 85 90 95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
 100 105 110

Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
 115 120 125

Met His Ala Ala Ala Ala Ala Ala Ala Ala Arg Arg Arg Ala Arg Ser
 130 135 140

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Arg Pro Val Lys Val Tyr Pro
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Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro
 35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50 55 60

47259500.txt

Pro Ala Pro Glu Ala Val Pro Glu Ser Leu Leu Asp Leu Pro Glu Ala
65 70 75 80

Asp Thr Val Val Val Pro Asp Ser Ser Asn Trp Gln Met His Gly Tyr
85 90 95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
100 105 110

Pro Phe Val Pro Thr Glu Pro His His His His Pro Gly Gly Arg Gln
115 120 125

Met His Ala Ala Ala Ala Ala Ala Ala Arg Arg Arg Ala Arg Cys
130 135 140

Gly Asn Leu Ser Thr Cys Met Leu Gly Thr Tyr Thr Gln Asp Phe Asn
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<210> 9
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<223> Description of Artificial Sequence: Synthetic peptide

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1 5

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<210> 17
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 <212> PRT
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<400> 19
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<210> 20
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<223> Description of Artificial Sequence: Synthetic peptide

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<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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<400> 22

Ala Ala Ala Ala Arg Ala Ala Ala Ala Arg Arg Ala Ala Ala Ala
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<210> 23

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<210> 24

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<220>
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<400> 26
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 1 5 10 15

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 <223> Description of Artificial Sequence: Synthetic peptide

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<223> Description of Artificial Sequence: Synthetic peptide

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Ala Ala Ala Ala Ala Ala Ala Ala Arg Arg Ala Ala Ala Arg
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<223> Description of Artificial Sequence: Synthetic peptide

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<211> 15

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> Description of Artificial Sequence: Synthetic peptide

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<211> 15

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<210> 34
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 <211> 37
 <212> PRT
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Arg Asn Lys Gly Gln
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<400> 38
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 1 5 10 15

Val Pro Ile Phe Thr Tyr Gly Glu Leu Gln Arg Met Gln Glu Lys Glu
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Arg Asn Lys Gly Gln
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 <211> 1759
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47259500.txt

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 35 40 45

Val Tyr Leu Ala Glu Glu Gly Gly Arg Lys Val Ser Gln Leu Asp Trp
 50 55 60

Lys Phe Asn Asn Ala Ala Ile Ile Lys Gly Ala Ile Asn Trp Asp Leu
 65 70 75 80

Met Pro Gln Ile Ser Ile Gly Ala Ala Gly Trp Thr Thr Leu Gly Ser
 85 90 95

Arg Gly Gly Asn Met Val Asp Gln Asp Trp Met Asp Ser Ser Asn Pro
 100 105 110

Gly Thr Trp Thr Asp Glu Ser Arg His Pro Asp Thr Gln Leu Asn Tyr
 Page 16

115

120

125

Ala Asn Glu Phe Asp Leu Asn Ile Lys Gly Trp Leu Leu Asn Glu Pro
 130 135 140

Asn Tyr Arg Leu Gly Leu Met Ala Gly Tyr Gln Glu Ser Arg Tyr Ser
 145 150 155 160

Phe Thr Ala Arg Gly Gly Ser Tyr Ile Tyr Ser Ser Glu Glu Gly Phe
 165 170 175

Arg Asp Asp Ile Gly Ser Phe Pro Asn Gly Glu Arg Ala Ile Gly Tyr
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Trp Asn Arg Val Thr Asn Lys Lys Gly Asn Thr Ser Leu Tyr Asp His
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<213> Escherichia coli

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 Asp Glu Ser Arg His Pro Asp Thr Gln Leu Asn Tyr Ala Asn Glu Phe
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 Gly Gly Ser Tyr Ile Tyr Ser Ser Glu Glu Gly Phe Arg Asp Asp Ile
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 Glu Leu Gly Gly Thr Phe Lys Tyr Ser Gly Trp Val Glu Ser Ser Asp
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 225 230 235 240
 Val Thr Pro Asn Ala Lys Val Tyr Val Glu Gly Ala Trp Asn Arg Val
 245 250 255
 Thr Asn Lys Lys Gly Asn Thr Ser Leu Tyr Asp His Asn Asn Thr
 260 265 270
 Ser Asp Tyr Ser Lys Asn Gly Ala Gly Ile Glu Asn Tyr Asn Phe Ile
 Page 18

275

280

Thr Thr Ala Gly Leu Lys Tyr Thr Phe
290 295